



## 5 Additional tasks due to country legislation



### Note

*The exhaust gas tests are valid only for countries that do not have specific guidelines for the exhaust gas test.*

### 5.1 Exhaust gas test



### Note

- ◆ *Follow the specific rules for the country.*
- ◆ *The exhaust gas tests described below were performed in compliance with the rules in force in Germany.*

Intervals for the exhaust gas test in Germany:

Vehicles with catalytic converter adjusted or vehicles with diesel engines:

- ◆ 3 years after the first approval and, then, every 2 years.
- ◆ Vehicles for commercial transport of people, such as, for example, taxis: at every 1 year.

Exhaust gas test for diesel engines [⇒ page 113](#).

Exhaust gas test for petrol engines [⇒ page 99](#).

#### 5.1.1 Exhaust gas test for petrol engines

Exhaust gas test for petrol engines without OBD

Exhaust gas test for petrol engines with OBD

The test sequence was prepared for the test execution with the combination of test devices for analyzing exhaust gases, comprised of:



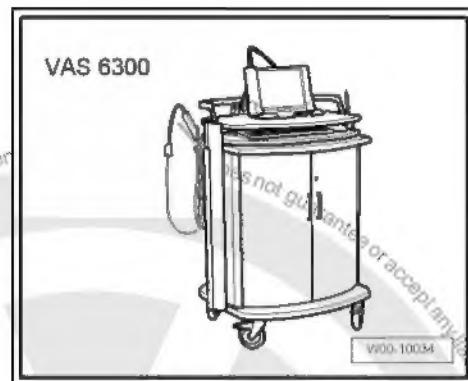
### Note

- ◆ *The description below refers to vehicles equipped with "On-Board Diagnosis", OBD, with catalytic converter adjusted.*
- ◆ *The OBD checks all components and systems that influence the quality of the exhaust gases.*

Special tools and workshop equipment required



- ◆ Gas tester - 4 components (CO, CO2, HC and O2) or GAS TESTER -VAS 6300-



- ◆ OBD adapter cable -VAS 5052/16-



Note

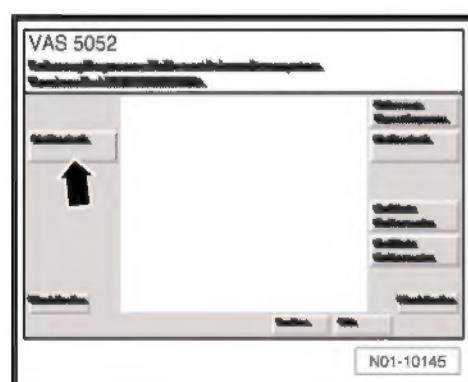
- ◆ *It is only possible to perform an exhaust gas test when all devices from the Gas tester - 4 components (CO, CO2, HC and O2) or GAS TESTER -VAS 6300- are working and connected with one another, according to the operation instructions.*
- ◆ *All works to be performed are indicated by the Gas tester - 4 components (CO, CO2, HC and O2) or GAS TESTER -VAS 6300-.*

Prior conditions for inspection:

- All conditions for inspection and data necessary for the exhaust gas test are available on the exhaust gas test datasheet for the respective engine ⇒ Data sheets for exhaust emission test.
- The exhaust gas test datasheet must be printed to enable the barcode reading.
- Automatic gearbox: selector level in position "P" or "N".
- Mechanical transmission: selector lever in "neutral gear".
- Handbrake operated.
- Perform the exhaust gas test according to the instructions on the screen.

Startup screen:

- Select the function-arrow-, "Exhaust gas test".



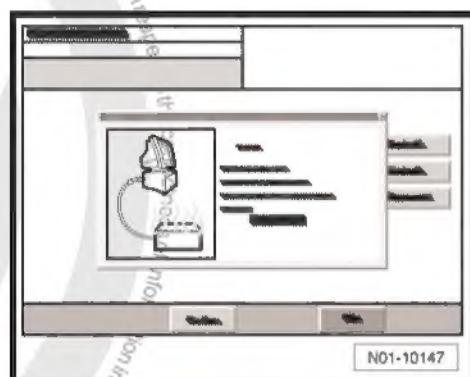


The general view for selecting the respective type of exhaust gas test is displayed.

- Select "Petrol exhaust gas test" -arrow-.



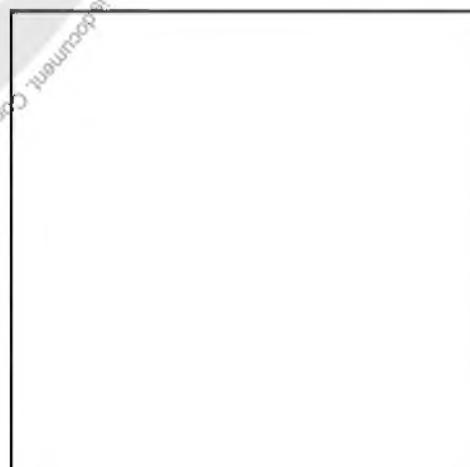
The indication for the heating period is displayed.



- Continue the exhaust gas test according to the instructions on the screen.
- When the selection of the theoretical value of exhaust gases is displayed, select "Selection of theoretical value of exhaust gases", -arrow-.
  - ◆ Select "Pre-defined value" when it is related to the first exhaust gas test,
  - ◆ Or, when it is necessary to perform an exhaust gas test again, select "last vehicle".
- Press the indication "Continue, " -1-.

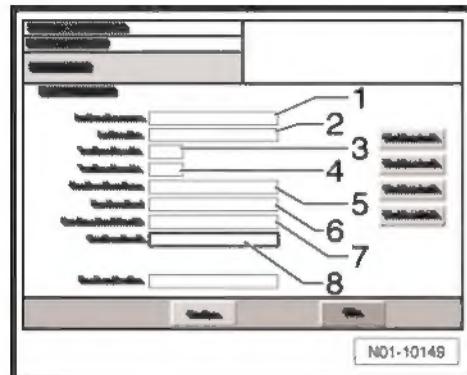
Vehicle's data entering:

When the vehicle data entering menu is displayed:





- Enter in positions -1...7- the vehicle's data included on the vehicle's documentation.
  - ◆ -1- Vehicle's manufacturer: "for example VOLKSWAGEN — VW"
  - ◆ -2- Type of vehicle: "for example, 1J"
  - ◆ -3- Code number for 2: "z.B. 0603"
  - ◆ -4- Code number for 3: "for example 358"
  - ◆ -5- Engine identification letters "for example, AQY"
  - ◆ -6- License plate: "for example WOB-HH 1234"
  - ◆ -7- Vehicle identification number: "for example WWWZZZ9NZYW123456"
- Enter in position- 8 - the kilometers traveled "for example, 32000".



**Note**

- ◆ Other functions can be optioned with the **skip** key.
- ◆ You can interrupt the test with the **skip** key.

- Select "with OBD", -arrow-.

Entering nominal data for the exhaust gas test:



**Note**

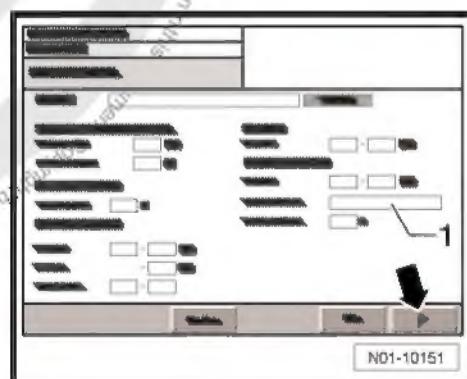
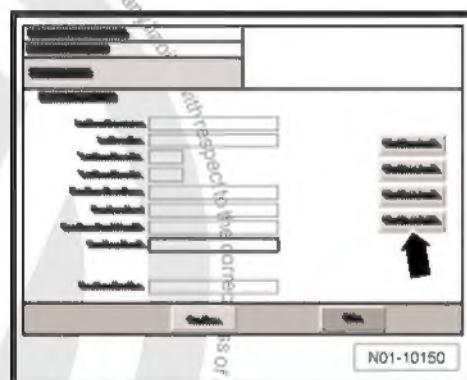
- ◆ If the nominal values do not exist as barcode, they must be entered manually.
- ◆ All conditions for test and data necessary for the exhaust gas test are included on the exhaust gas test datasheet for the respective engine.

- Follow the indications on the screen during the manual data entering.

- With "Inspection values for the exhaust gas test" on the screen, enter successively the values displayed on the exhaust gas test datasheet:

- 1 - Test rotation (idle speed rotation)
- 2 - Period of catalytic converter heating
- 3 - Engine temperature
- 4 - High idle speed rotation
- 5 - Content of CO with high idle speed rotation
- 6 - Lambda probe with high idle speed rotation
- 7 - Idle speed rotation
- 8 - Select the type of adjustment probe, enter "Enrichment probe" or "Broad range probe" -1-.
- 9 - Lambda probe value

- After entering all data correctly, press the "Continue" key -arrow-.



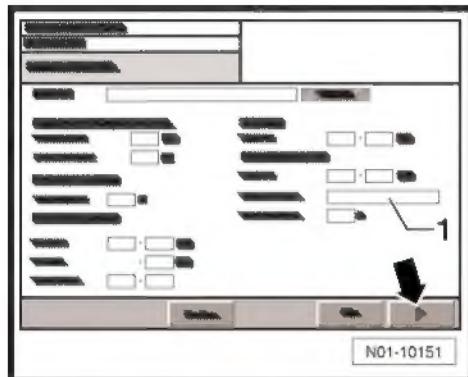


Entering nominal data for the exhaust gas test with the barcode:

- If the nominal data for the exhaust gas test is available with the barcode, read the barcode in the exhaust gas test data-sheet with the reading pencil.

The screen displays the indication with all necessary data.

- Press the key -arrow- to continue the process.

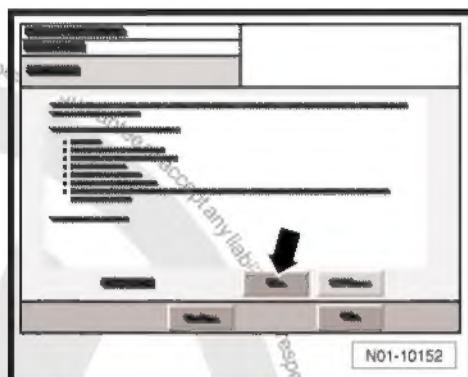


Visual inspection:

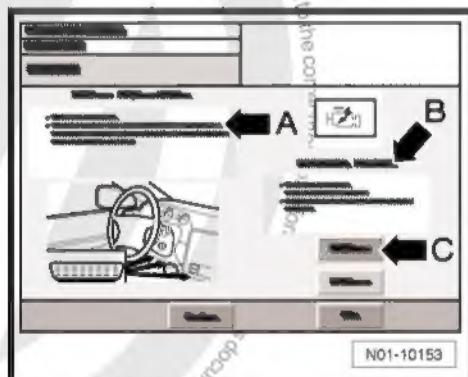
- Follow the indications on the screen.
- Perform the visual inspections.
- If there are no problems, press "OK" on the screen -arrow-.



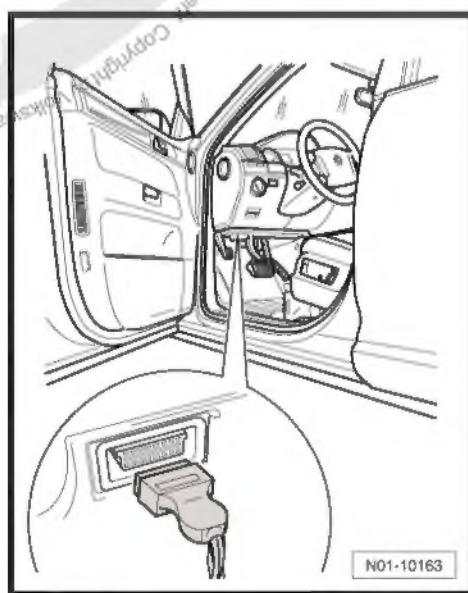
*When the Not OK button is pushed, you start a new test.*



You can see beside the test inspection indicator, where it is necessary to connect the diagnosis connector -A-, as well as check the MI lamp - B -.

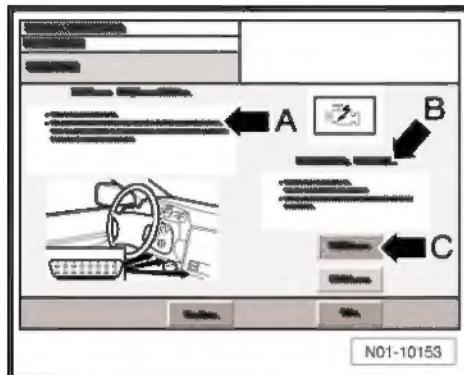


- Follow the indications on the screen.
- Turn ignition off.
- Connect the diagnosis cable to the EOBD socket.





- Turn the ignition on.
- Perform the visual inspection of the "MI Lamp".
- When the light is turned on, press on the screen "Light on"  
- arrow C -.



- Follow the indications on the screen, - arrow C - and -arrow A -.
- ◆ Start the engine.
- ◆ Perform an inspection with the MI lamp.
- Insert the exhaust gas probe in the exhaust gas exit tube.



**Note**

*The exhaust gas test process continues if the measuring probe is in the exhaust gas exit tube.*



It automatically switches to readiness code.

The readiness code checks if all control devices work.



**Note**

- ◆ If all indication values are at zero, no probe inspection test is performed.
- ◆ If not all indication values are at zero, a probe inspection test is further performed.

- Confirm the condition of the "MI lamp" -arrow B-.

Condition of the catalytic converter:

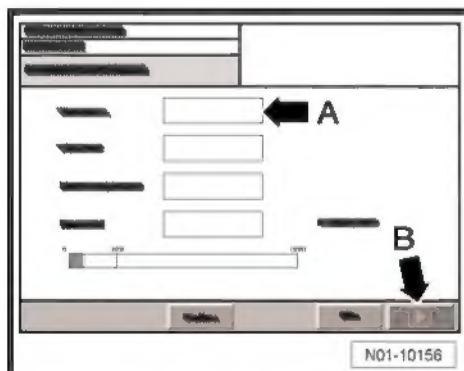
It switches automatically to the catalytic converter heating phase.

- Follow the indications on the screen.

The measurement starts as soon as the engine rotation reaches the necessary level.

- Keep the engine rotation on the necessary level.

The remaining time for performing the heating phase is indicated -arrow A-.





### Heating period:

It automatically switches to the engine temperature measurement indication.

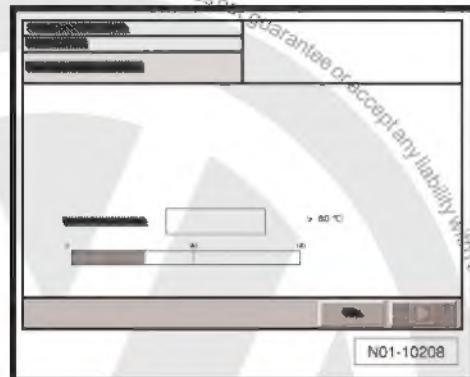
- Follow the indications on the screen.



#### Note

*This indication appears just before the engine temperature reaches 80 degrees Celsius.*

- The engine temperature must reach the necessary level.



### Measurement in high idle speed rotation:

It switches automatically to the high idle speed rotation measurement indication.

- Follow the indications on the screen.

The measurement starts as soon as the engine rotation reaches the necessary level.

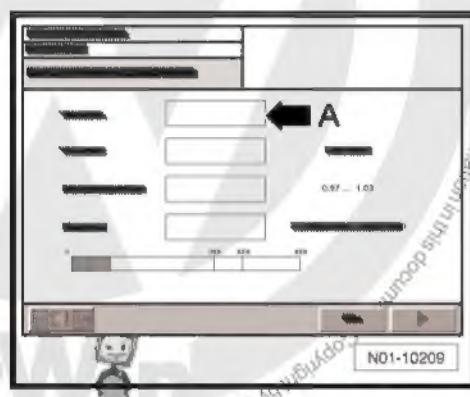


#### Note

- With the key — it is possible to cancel the measurement, that is, not perform the exhaust gas test.
- With the key — the measurement values are reset and the test can be repeated.

- Keep the engine rotation on the necessary level.

The remaining time for performing the measurement is indicated on the space -arrow A-.





**Idle speed rotation measurement and content of CO:**

It automatically switches to the indication of idle speed rotation measurement and content of CO.

The measurement starts as soon as the engine rotation reaches the necessary level.

The remaining time for performing the measurement is indicated on the space -arrow A-.

**Probe inspection test:**



**Note**

*The probe inspection test is not performed when all readiness code values are at zero.*

It switches automatically to the probe inspection test indication.



**Note**

*The probe inspection test is performed individually for each Lambda Probe.*

The measurement starts as soon as the engine rotation reaches the necessary level.

- Keep the engine rotation on the necessary level.

The remaining time for performing the measurement is indicated on the space -arrow A-.

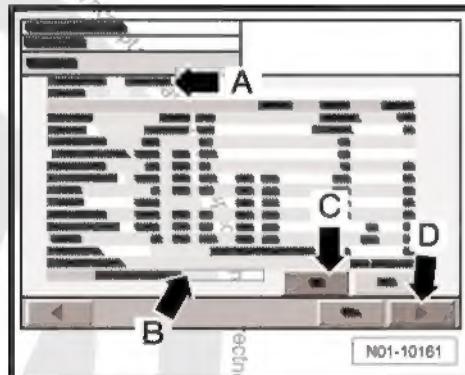
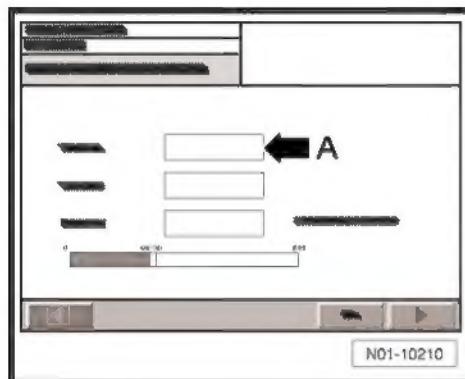
**Assessment:**

After the exhaust gas test, the report will be displayed on the screen.

The test result is indicated.

In this location, remarks about the exhaust gas test can be entered -arrow A-. They are included on the test report.

- After successfully performing the exhaust gas test, select on the hanging menu - arrow B - "Assigned exhaust gas test plate" and the date.
- Confirm with "Yes" - arrow C -.
- Then, press it.





After the confirmation, two "TEST CERTIFICATES" are automatically printed.

- To get other certificates, press the -arrow A - "Print" button.
- Follow the indications on the screen.
- Remove the exhaust gas probe from the final exhaust gas tube.
- Then, press  - arrow B

The exhaust gas test is concluded. It is possible to perform a new exhaust gas test.

Exhaust gas test for petrol engines without OBD



Note

- ◆ All test conditions and data necessary for the exhaust gas test:  
⇒ "Exhaust gas test"
- ◆ The ignition point is determined by the Engine control unit - J623- and will not be indicated. It is not possible to make an adjustment.
- ◆ The idle speed rotation and the content of CO cannot be adjusted (just checked). If there are divergences between the actual and the theoretical values: perform a Repair Measure!
- ◆ The content of CO is adjusted to the theoretical value by the lambda probe adjustment. The defects in the lambda probe inspections are processed by the Diagnosis, Measurement and Information System -VAS 5051A/52- and stored in the fault memory.
- ◆ When consulting the fault memory, the faults detected (electronic engine system) must be eliminated and deleted from the fault memory.
- ◆ To avoid injuries in people and/or destruction of ignition and injection systems, the ignition system cables (also high voltage cables) must be turned on and off only with the ignition turned off.



Note

The following description refers to vehicles without OBD with catalytic converter adjusted.

Special tools and workshop equipment required

- ◆ Gas tester - 4 components (CO, CO2, HC and O2) or GAS TESTER -VAS 6300-



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VAS 6300

W00-10034

- ◆ Adapter for older vehicles -VAS 5051/2-



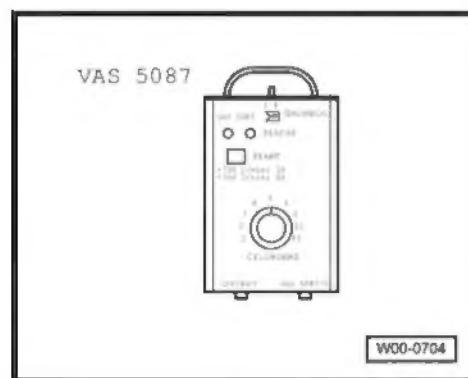
or

- ◆ Rotation adapter -VAS 5087/ A-
- ◆ Exhaust gas test requester



Note

- ◆ *It is only possible to perform an exhaust gas test when all devices from the Gas tester - 4 components (CO, CO<sub>2</sub>, HC and O<sub>2</sub>) or GAS TESTER -VAS 6300- are working and connected with one another, according to the operation instructions.*
- ◆ *All works to be performed are indicated by the Gas tester - 4 components (CO, CO<sub>2</sub>, HC and O<sub>2</sub>) or GAS TESTER -VAS 6300-.*

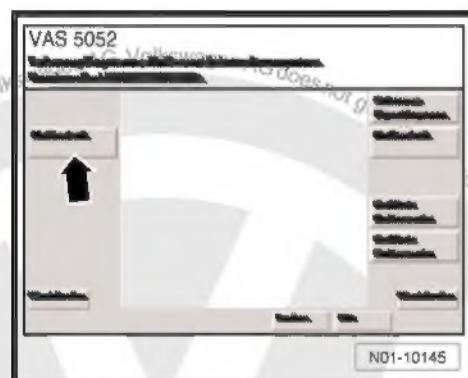


Prior conditions for inspection:

- All conditions for inspection and data necessary for the exhaust gas test are available on the exhaust gas test datasheet for the respective engine⇒ Data sheets for exhaust emission test.
- The exhaust gas test datasheet must be printed to enable the barcode reading.
- Automatic gearbox: selector level in position "P" or "N".
- Mechanical transmission: selector lever in "neutral gear".
- Handbrake operated.
- Perform the exhaust gas test according to the instructions on the screen.

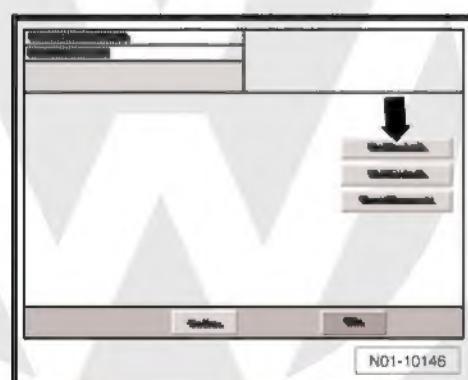
Startup screen:

- Select the function-arrow-, "Exhaust gas test".



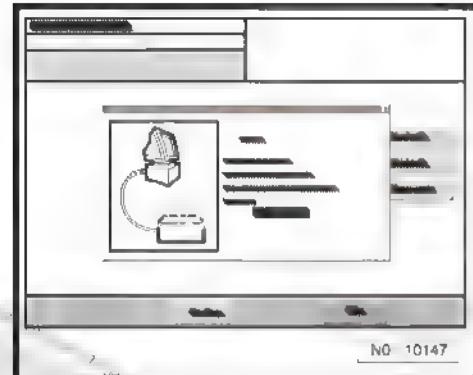
The general view for selecting the respective type of exhaust gas test will be displayed.

- Select "Petrol exhaust gas test" -arrow-.





The indication for the heating period will be displayed.



- Continue the exhaust gas test according to the instructions on the screen.
- When the selection of the theoretical value of exhaust gases is displayed, select the respective "Selection of theoretical value of exhaust gases", -arrow-.
  - ◆ Select "Pre-defined value" when it is related to the first exhaust gas test,
  - ◆ Or, when it is necessary to perform an exhaust gas test again, select "last vehicle".
- Charge in the indication "Continue, " inquire -1-

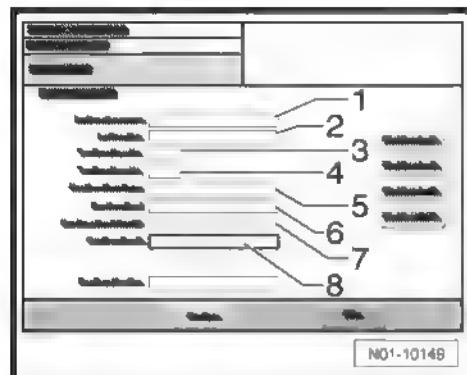
Vehicle's data entering:

The vehicle's data entering menu will be displayed.





- Enter in positions -1...7- the vehicle's data included on the vehicle's documentation.
- ◆ -1- Vehicle's manufacturer: "for example VOLKSWAGEN — VW"
- ◆ -2- Type of vehicle: "for example, 1J"
- ◆ -3- Code number for 2: "z B. 0603"
- ◆ -4- Code number for 3: "for example 358"
- ◆ -5- Engine identification letters "for example, AQY"
- ◆ -6- License plate: "for example WOB-HH 1234"
- ◆ -7- Vehicle identification number: "for example  
WWZZZ1JZYW123456"
- Enter in the space - 8 - the kilometers traveled "for example, 32000".



Note

- ◆ *With the Skip key, it is possible to call new functions.*
- ◆ *With the Skip key, it is possible to interrupt the test.*

Entering nominal data for the exhaust gas test:

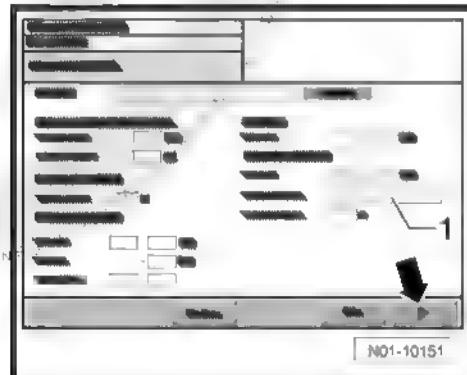


Note

- ◆ *If the nominal values do not exist as barcode, they must be entered manually.*
- ◆ *All conditions for test and data necessary for the exhaust gas test are included on the exhaust gas test datasheet for the respective engine.*

Manually entering nominal data for the exhaust gas test:

- Follow the indications on the display during the manual data entering.
- With "Inspection values for the exhaust gas test" on the screen, enter successively the values displayed on the exhaust gas test datasheet:
  - 1 - Test rotation (idle speed rotation)
  - 2 - Period of catalytic converter heating
  - 3 - Engine temperature
  - 4 - Increased idle speed rotation
  - 5 - Content of CO with high idle speed rotation
  - 6 - Lambda with high idle speed rotation
  - 7 - Idle speed operation
  - 8 - Select the type of probe adjustment: "Enrichment probe" or "Broad range probe" - 1 -
  - 9 - Lambda probe value
- After entering all data correctly, press the "Continue" key -arrow-



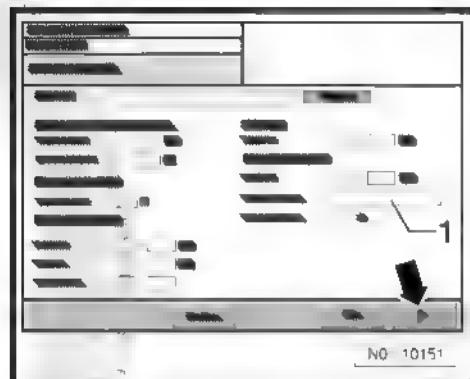


### Entering nominal data for the exhaust gas test with the barcode:

- If the nominal data for the exhaust gas test is available with the barcode, read the barcode in the exhaust gas test data-sheet with the reading pencil.

The screen displays the indication with all necessary data

- Press the key -arrow- to continue the process.



### Visual inspection:

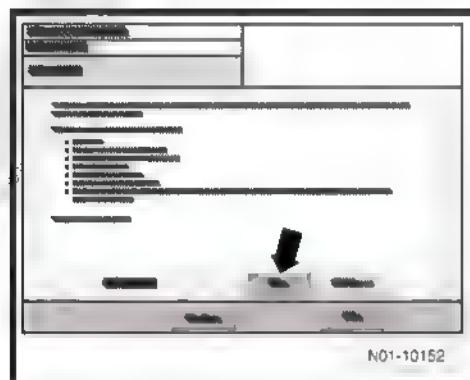
- Follow the indications on the screen.
- Perform the visual inspections.
- If there are no problems, press the "in order" key -arrow-.



#### Note



*When the Not OK key is pressed, a test is originated.*



Here you find the indication of visual inspection with the instruction to connect the cable to the vehicle.

- Follow the indications on the screen.
- Turn ignition off.
- Connect the adapter for old vehicles -VAS 5051/2- or rotation number adapter -VAS 5087/- or the Diagnosis cable -VAS 5051/6A- to the vehicle.



#### Note

- ◆ *In some engines, it is not possible to connect the inductive sensor to cylinder 1.*
- ◆ *In these engines, you can use the rotation number adapter - VAS 5087/-.*
- ◆ *In some engines, you must use the rotation number adapter - VAS 5087/-.*
- Turn the ignition on.
- Insert the exhaust gas probe in the exhaust gas exit tube.



#### Note

*The exhaust gas test process continues if the measuring probe is in the exhaust gas exit tube.*

It automatically switches to the readiness code

Condition of the catalytic converter:

It automatically switches to the catalytic converter's heating phase.

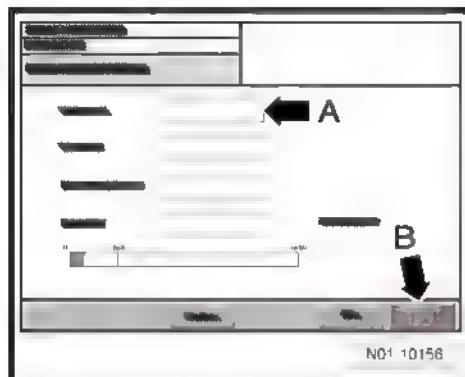


- Follow the indications on the screen.

The measurement starts as soon as the engine rotation reaches the necessary level

- Keep the engine rotation on the necessary level.

The remaining time for performing the heating phase is indicated -arrow A-.



Heating period:

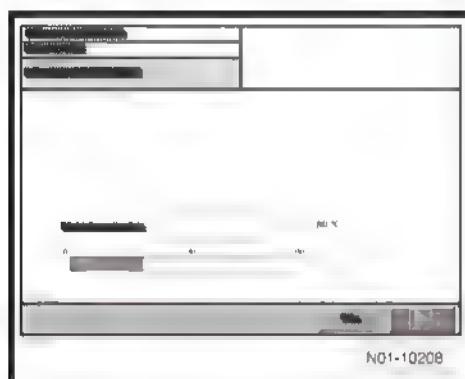
It automatically switches to the engine temperature measurement indication.

- Follow the indications on the screen.



*This indication appears just before the engine temperature reaches 80 degrees Celsius.*

- The engine temperature must reach the necessary level.



Measurement in high idle speed rotation:

It switches automatically to the high idle speed rotation measurement indication.

- Follow the indications on the screen.

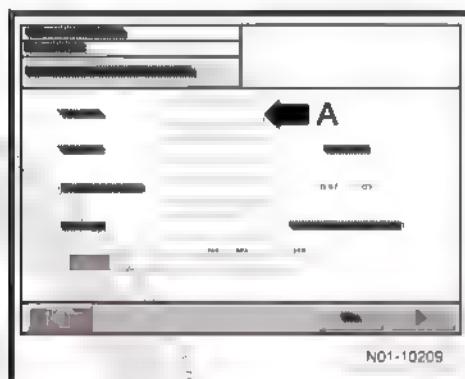
The measurement starts as soon as the engine rotation reaches the necessary level.



- ◆ *With the key,  it is possible to void the measurement, that is, not perform the exhaust gas test.*
- ◆ *With the key,  the measurement values are reset and the test can be repeated.*

- Keep the engine rotation on the necessary level.

The remaining time for performing the measurement is displayed -arrow A-.





#### Idle speed rotation measurement and content of CO:

It switches automatically to the indication of idle speed rotation measurement and content of CO.

The measurement starts as soon as the engine rotation reaches the necessary level.

The remaining time for performing the measurement is displayed -arrow A-.

#### Probe adjustment test:

It automatically switches to the probe adjustment test indication.

The measurement starts as soon as the engine rotation reaches the necessary level.

- Keep the engine rotation on the necessary level.

The remaining time for performing the measurement is displayed -arrow A-.

#### Assessment:

After the exhaust gas test, the report will be displayed on the screen.

The test result is indicated.

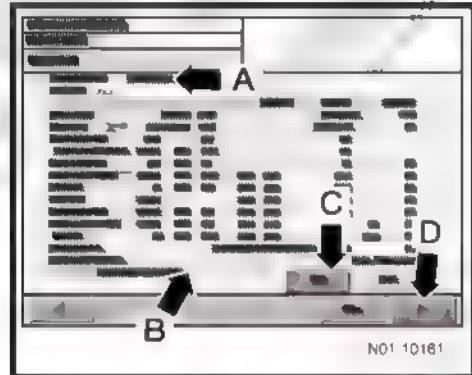
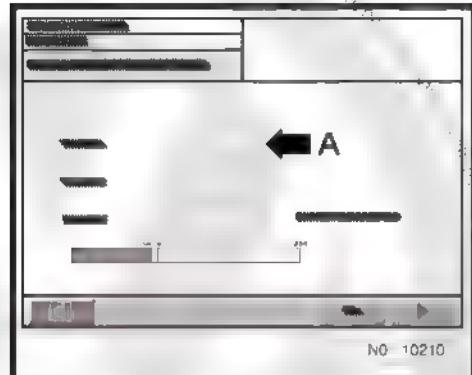
In this location, remarks about the exhaust gas test can be entered -arrow A-. They are included on the test report.

- After successfully performing the exhaust gas test, select on the hanging menu - arrow B - "Assigned exhaust gas test plate" and the date.
- Confirm with "Yes", inquire - arrow C -.

After the confirmation, two "TEST CERTIFICATES" are automatically printed.

- To get other certificates, press the - arrow A - "Print" key.
- Follow the indications on the screen.
- Remove the exhaust gas probe from the final exhaust gas tube.
- Then, press the  key -arrow B-

The exhaust gas test is finished. It is possible to perform a new exhaust gas test.



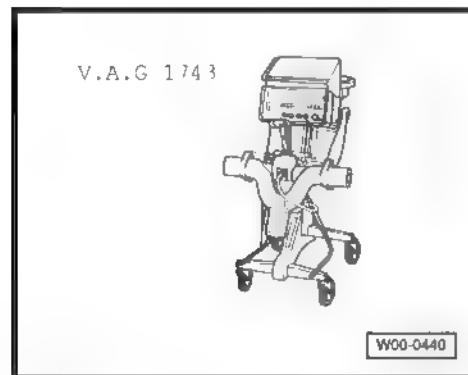
### 5.1.2 Exhaust gas test for diesel engines

The test sequence was prepared for its execution with the combination of test devices for analyzing exhaust gases.

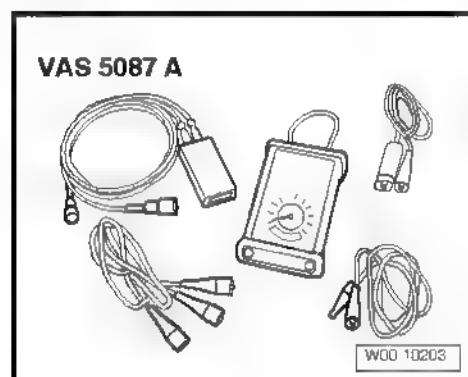
Special tools and workshop equipment required



- ◆ Diesel engine test device -V.A.G 1743-

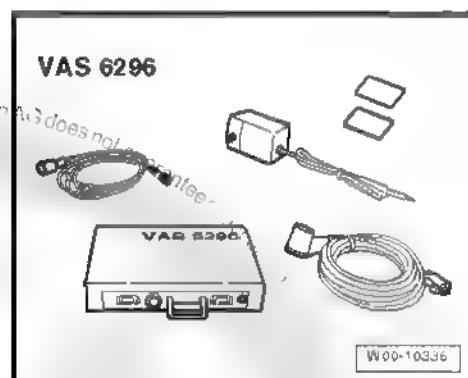


- ◆ Rotation adapter -VAS 5087 A-



◆ or

- ◆ Rotation adapter -VAS 6296-



- ◆ Data reading device -V.A.G 1798-

◆ or

- ◆ Data reading device -V.A.G 1799-

- ◆ ⇒ Data sheets for exhaust emission test



Note

- ◆ All test conditions and data necessary for the exhaust gas test ⇒ Data sheets for exhaust emission test
- ◆ If there is the possibility, the test must be performed after a test drive. If, for any reason (atmospheric conditions, inadmissible noise level in residential areas), it is not possible, the test can also be performed on the workshop.
- ◆ During the measurement, the engine bonnet must be closed until the first clutch, due to the noise.





Perform a visual inspection of the components that influence the exhaust gases

- Perform the visual inspection in relation to
  - ◆ Existence time
  - ◆ Integrity
  - ◆ Tightness
  - ◆ Damage



*When finding defects, they must be eliminated*

Test conditions

- Minimum engine temperature of 80 °C
- No fault in the memory

Turn the test devices on

Connect the Diesel engine test device -V.A.G 1743 - according to the operation instructions.

Description, measurement process, device operation, start-up and operation ⇒ Operation instructions V.A.G 1743

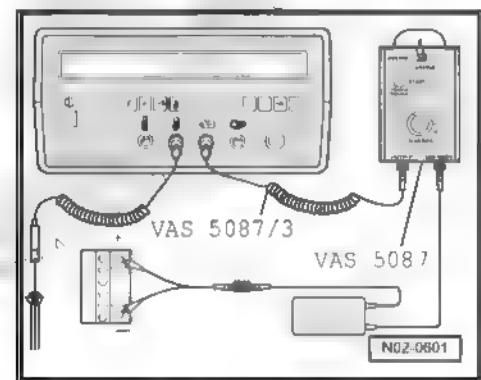
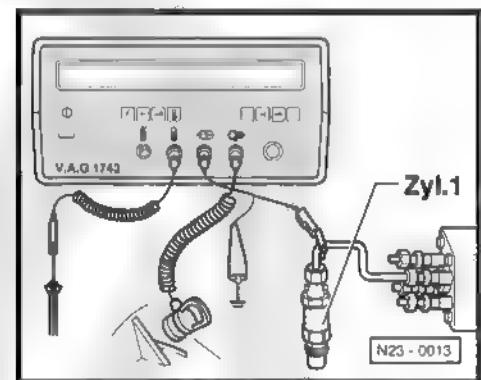


- ◆ In engines where the hole for the PMS sensor is not accessible, has difficult access or is large, you can use the Rotation adapter -VAS 5087 A- or the Rotation adapter -VAS 6296- instead of the PMS sensor.
- ◆ It is not possible to use the terminal transmitter (for cylinder 1) from the Diesel engine test device -V.A.G 1743-.

- Connect the Rotation adapter -VAS 5087 A- with the ignition turned off, as follows.



- ◆ Follow the operation instructions for the Rotation adapter -VAS 5087 A-!
- ◆ You must mandatorily follow the safety indications in the operation instructions!
- Connect the Adapter cable -VAS 1587/3- from the output connection of the Rotation adapter -VAS 5087 A- to the terminal transmitter input from the Diesel engine test device -V.A.G 1743-
- Turn the cylinder number switch to "4" (4-cylinder engine)
- Connect an Adapter -VAS 5087/1- cable to the Rotation adapter -VAS 5087 A- (VAS 5087/1 socket).



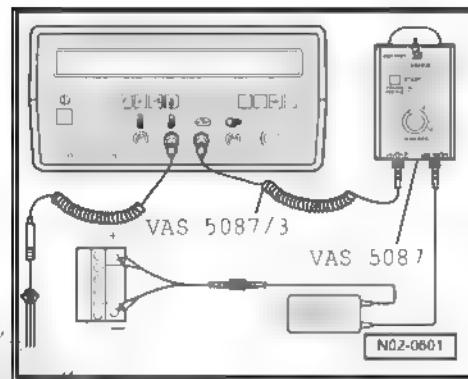


- With the other Adapter -VAS 5087/1- cable, make a connection to the vehicle's battery. For this purpose
  - ◆ red terminal on positive
  - ◆ black terminal on negative



Note

- ◆ When you use the Rotation adapter -VAS 5087 A-, press the "Start" key. The red signaling lamp must be turned on for approx 10 seconds. Then, the green signaling lamp must turn on.
- ◆ In the Diesel engine test device -V.A.G 1743-, the engine rotation must be indicated now.
- ◆ If the engine rotation is indicated incorrectly or not indicated at all: ⇒ Operation instructions from VAS 5087



Test sequence

- Start the engine and let it run only in idle speed.
- Press on the data reading device **F2** the key for "AU diesel".

Upon indication on display:

Insert vehicle identification card!  
Manual inputting with the -> Key

- Through the data reading device keyboard, enter the following vehicle identification data:
  - ◆ License plate
  - ◆ Vehicle manufacturer = "Number 2"
  - ◆ Code = "for Number 2"
  - ◆ Type of vehicle = "Number 3"
  - ◆ Code = "for Number 3" (the first three digits)
  - ◆ Vehicle identification number = "Number 4"
  - ◆ Engine identification letters
  - ◆ Kilometers traveled
- Confirm the vehicle identification data provided through the **Q** key.



Check input with -> Key  
Continue with the - Q key

- Confirm the vehicle identification data through the **Q** key.

Upon indication on display:

Select barcode  
Manual inputting with the -> Key

- Enter the theoretical values with the data reading device reader, sliding it over the respective code in the datasheet on the "Exhaust gas analysis" folder.
- or
- With the **Q** key, make manual inputs according to instructions on the data reading device display



Upon indication on display.

Check input with -> Key  
Continue with the - Q key

- Confirm the vehicle data entered or read through the **Q** key.

Upon indication on display

Visual inspection Ok = j not Ok =

- Enter the visual inspection result

Upon indication on display

F1 temperature measurement with sensor  
F2 enter manually the temperature measurement

- Press the **F1** key for "temperature measurement with sensor".
- When the engine oil temperature reaches 80° C, remove the sensor and insert the oil dipstick up to the stop.
- Proceed with the test by pressing the **Q** key.

Upon indication on display:

Idle speed rotation  
>  
ACTUAL rotation xxxx/  
min THEORETICAL xxxx/min

- Press the key **Q**.

Idle speed rotation out of the theoretical value field:



*The idle speed rotation and the maximum rotation can be tested, but cannot be adjusted.*

- If the values are not in the theoretical value field, a Repair Measure must be performed.
- Proceed with the test by pressing the **Q** key.

Upon indication on display:

Engine cutting rotation  
5 sec.  
ACTUAL rotation xxxx/  
min THEORETICAL xxxx...xxxx/min

- Press the accelerator pedal up to the end for the time required, and keep it pressed



### WARNING

*If the engine cutting rotation is exceeded, release the accelerator pedal immediately and perform a Repair measure.*

Upon indication on display

Engine cutting rotation  
>  
ACTUAL rotation xxxx/  
min THEORETICAL xxxx...xxxx/min

- Release the pedal



- Check the actual value; for this purpose, continue the actual value indication with the key .

Engine cutting rotation out of the theoretical value field

- If the values are not in the theoretical value field, a Repair Measure must be performed
- Proceed with the test by pressing the  key.

Upon indication on display:

Idle speed rotation 1<sup>st</sup> measurement 15 sec  
ACTUAL rotation xxxx/  
min THEORETICAL xxxx...xxxx/min

- The data reading device assumes actual values in 15 seconds.

Upon indication on display:

Data transmission for the gas oil test device  
Quickly press the pedal

- Press the accelerator pedal up to the end and keep it pressed.

With the indication on display:

Data transmission for the gas oil test device  
Free acceleration in movement

- Keep pressing the accelerator pedal.

Upon indication on display:

Idle speed rotation 2<sup>nd</sup> measurement 15 sec  
ACTUAL rotation xxxx/  
min THEORETICAL xxxx...xxxx/min

- Release the pedal.

The data reading device assumes actual values in 15 seconds.

Upon indication on display:

Data transmission for the gas oil test device  
Quickly press the pedal

- Press the accelerator pedal up to the end and keep it pressed.

With the indication on display:

Data transmission for the gas oil test device  
Free acceleration in movement



- Keep pressing the accelerator pedal.

Upon indication on display:

Idle speed rotation 3<sup>rd</sup> measurement 15 sec  
ACTUAL rotation xxxx/  
min THEORETICAL xxxx...xxxx/min

- Release the pedal

The data reading device assumes actual values in 15 seconds

Upon indication on display

Data transmission for the gas oil test device  
Quickly press the pedal

- Press the accelerator pedal up to the end and keep it pressed.



With the indication on display:

Data transmission for the gas oil test device  
Free acceleration in movement

- Keep pressing the accelerator pedal.

Upon indication on display:

Idle speed rotation 4° measurement 15 sec  
ACTUAL rotation xxxx/  
min THEORETICAL xxx...xxxx/min

- Release the pedal.

The data reading device assumes actual values in 15 seconds.

Upon indication on display:

Data transmission for the gas oil test device  
Quickly press the pedal

- Press the accelerator pedal up to the end and keep it pressed.

With the indication on display:

Data transmission for the gas oil test device  
Free acceleration in movement

- Keep pressing the accelerator pedal.

Upon indication on display:

Peak turbidity value -  
>  
ACTUAL x.xx/  
m THEORETICAL x...x.xx/m

- Release the pedal.
- Press the key

Upon indication on display:

Average turbidity value -  
>  
ACTUAL x.xx/  
m THEORETICAL x...x.xx/m

- Press the key

Upon indication on display:

Turbidity range width -  
>  
ACTUAL x.xx/  
m THEORETICAL x...x.xx/m

- Press the key

Upon indication on display:

Test Ok continue with the Q key  
Repeat the test with the F1 key

- Press the key



Note

- ◆ Upon indication on display:
- ◆ Press the **F1** key and repeat the test or perform a Repair Measure.

Test not Ok continue with the - **Q** key  
Repeat the test with the - **F1** key

Upon indication on display:

Input of clarifications with -> Taste  
Continue with the - **Q** key

- If necessary, enter clarifications by pressing the key **Q**.
- Press the key **Q**.

Upon indication on display:

Select tester/manual input with **F3**  
**F1** XXXXX **F2** XXXXX

- With keys **F1** to **F3** select the tester or enter the name.
- Press the **Q**, wait for the protocol.
- Press the key **Q**.
- Finish the test by pressing the **F2** key.

## 5.2 Glossary

These explanations refer only to the "Maintenance Cares". They are not intended to be universal!

Concept	Explanation
AU	Exhaust gas test.
ABS	(anti-blocking system), the ABS is a brake system adjustment that prevents the wheels from blocking while braking. Thus, the stability and the steering control are maintained.
ATF	(Automatic Transmission Fluid) gear oil for automatic gearboxes.
ATF level	"Level" of the gear oil for automatic gearboxes.
Cetane rate	(level of cetane) dimension of diesel's flammability.
DIN	Deutsches Institut für Normung e.V (German Institute for Standardisation).
EN	Europe Norm

Concept	Explanation
EOBD	European On-Board Diagnosis
FAME	Fatty Acid Methyl Ester
FSI	Fuel Stratified Injection
TFSI	Turbo Fuel Stratified Injection
MIL	(Malfunction Indicator Light) American designation for exhaust gas light K83
NOx	Nitric oxide



Concept	Explanation
OBD	On-Board Diagnosis; the OBD checks all components that influence the quality of the exhaust gases
OBD-II	American On-Board Diagnosis
PD	Unit of pump - nozzle injection in diesel engines
PR number	Abbreviation for production control number. They identify, among others, additional equipment, specific differences of each country and data about the movement steering
PM	(English: particulate matter) particulate material in diesel engine exhaust gases
QG0.	Vehicles "not" equipped in the factory with components for the LongLife service. For maintenance, the intervals that depend on time or kilometers traveled are applied (fixed intervals).

Concept	Explanation
QG1	Vehicles equipped in the factory with the active LongLife service. It means that the vehicles have a flexible service interval indicator and are equipped with the following components: <ul style="list-style-type: none"> <li>◆ Flexible service interval indicator in the combined instrument</li> <li>◆ Engine oil's level sensor</li> <li>◆ Brake pad's wearing indicator</li> </ul>
QG2	The LongLife service is not active from the factory. It means that the vehicles have a fixed service interval indicator (maintenance intervals dependent on time or kilometers traveled) and are equipped with the following components: <ul style="list-style-type: none"> <li>◆ Fixed service interval indicator in the combined instrument</li> <li>◆ Engine oil's level sensor</li> <li>◆ Brake pad's wearing indicator</li> </ul>
Readiness code	Binary 8-digit code that indicates if all relevant engine diagnoses were made in terms of exhaust gases
Octane rating	(level of octane researched) dimension of petrol resistance to detonation
SAE	(Society of Automotive Engineers) Association that provides recommendations/guidelines about transposing legal requirements (for example, rules)
SD	Aspirated diesel engine
SDI	Aspirated diesel engine with direct injection
SIA	Service interval indicator
SW	Acronym for the key size
RR	Turbo Diesel Engine
TDI	Turbo diesel engine with direct injection
VEP	Distributor injection pump
ULEV	Ultra Low Emission Vehicles

Concept	Explanation
WIV	Extension of maintenance interval
Common - Rail	Term that designates a general injection control by high pressure, which injects fuel in all seat cylinders
DPF	Diesel particle filter; this filter is assembled after the catalytic converter and filters particles from the exhaust gases
V engines	The V engine has cylinders arranged in an angle from 60° to 120°



Concept	Explanation
LongLife service	The LongLife service enables extremely long inspection and oil change intervals, depending on the driving mode and the conditions of use for each one. A special engine oil is necessary for the LongLife service
Enrichment probe	Also named (LSH- heated lambda probe), (LSF- flat lambda probe) or oxygen sensor. The emission of the lambda value is made through a tension curve with discontinuous growth. The lambda value is determined based on a change of tension. The probe is used as a post-catalytic converter probe.
Broad range probe	Also named (LSU probe) universal lambda probe. The emission of the lambda value is made through a tension curve with an apparently linear current intensity growth. The lambda value is determined based on a change of current intensity. Thus, the lambda value can be measured on a large measurement field (broad range). The probe is used as a pre-catalytic converter probe.
Balance of ash mass	The balance of ash mass informs about the level of the particle filter volume filling.
RDK, RKA	Control of tire pressure, indicator of tire control.

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